What is claimed is:

1. A method for determining a plurality of registration areas in a wireless communication system, comprising the steps of:

   determining a plurality of mobility data corresponding to a plurality of first partition units respectively and an overall cost of a plurality of first registration areas, wherein each of the first registration areas includes at least one of the first partition units;

   generating a plurality of second registration areas through a registration area determining procedure, wherein the second registration areas are constructed based on the mobility data of the first partition units;

   determining an overall cost of the second registration areas;

   comparing the overall cost of the first registration areas and the second registration areas; and

   determining a plurality of third registration areas and second partition units based on the result of comparison, wherein at least one of the second partition units is generated by combining at least two of the first partition units based on the mobility data of the corresponding first partition units when the overall cost of the first registration areas is lower than or equal to the overall cost of the second registration areas, at least one of the second partition units is generated by partitioning one of the first partition units based on the mobility data of the corresponding first partition units when the overall cost of the first registration areas is higher than the overall cost of the second registration areas.

2. The method of claim 1, wherein the method is executed recursively until a plurality of $(2n)^{th}$ registration areas and n^{th} partition units are determined that each of the $(2n)^{th}$ registration areas includes only one n^{th} partition unit and the overall cost of the $(2n-1)^{th}$ registration areas is smaller than or equal to the overall cost of the $(2n)^{th}$ registration areas.

3. The method of claim 1, wherein the mobility data at least include a plurality

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of mobility rates.

4. The method of claim 3, wherein the mobility rates can be determined by a plurality of traffic sources in the wireless communication system through at least one of the following operations which are gathering historical data, simulation and estimation.

5. The method of claim 1, wherein the first and the second partition units generating/determining step may be executed based on a plurality of loading limits of the wireless communication system.

6. The method of claim 5, wherein the loading limits at least include a plurality of constraints corresponding to any physical or virtual equipments in the wireless communication system.

7. The method of claim 1, wherein the registration area partitioning procedure may be at least one of the K-L algorithm and the F-M algorithm.

8. The method of claim 1, wherein the registration area can be determined by at least one of the following: a location area (LA) of a GSM system, a routing area (RA) of a packet-switched or a 3G systems, a registration location area (RLA)/overlapping location area (OLA) and a paging area of a PDC and a PHS system, a cell area (CA) of a 3G systems, and an UTRAN Registration Area of a UMTS/WCDMA system.

9. The method of claim 1, wherein when the first partition units are the non-partitionable, generating the second partition units by combining at least two of the first partition units based on the mobility data of the corresponding first partition units is done.

10. A method for determining a plurality of registration areas in a wireless communication system, comprising the steps of:

   generating a plurality of second registration areas through a registration area determining procedure, wherein the first registration areas are constructed based on a plurality of mobility data corresponding to a plurality of first partition units and a plurality of first registration areas;

comparing an overall cost corresponding to the first registration areas with an overall cost corresponding to the second registration areas; and

determining a plurality of third registration areas and second partition units based on the result of comparison, wherein at least one of the second partition units is generated by combining at least two of the first partition units based on the mobility data of the corresponding first partition units when the overall cost of the first registration areas is lower than or equal to the overall cost of the second registration areas, at least one of the second partition units is generated by partitioning one of the first partition units based on the mobility data of the corresponding first partition units when the overall cost of the first registration areas is higher than the overall cost of the second registration areas.

11. The method of claim 10, wherein the method is executed recursively until a plurality of $(2n)^{th}$ registration areas and n^{th} partition units are determined that each of the $(2n)^{th}$ registration areas includes only one n^{th} partition unit and the overall cost of the $(2n-1)^{th}$ registration areas is smaller than or equal to the overall cost of the $(2n)^{th}$ registration areas.

12. The method of claim 10, wherein the mobility data at least include a plurality of mobility rates.

13. The method of claim 12, wherein the mobility rates can be determined by a plurality of traffic sources in the wireless communication system through at least one of the following operations which are gathering historical data, simulation and estimation.

14. The method of claim 10, wherein the first and the second partition units generating/determining step may be executed based on a plurality of loading limits of the wireless communication system.

15. The method of claim 14, wherein the loading limits at least include a plurality of constraints corresponding to any physical or virtual equipments in the wireless communication system.

16. The method of claim 10, wherein the registration area partitioning procedure may be at least one of the K-L algorithm and the F-M algorithm.

17. The method of claim 10, wherein the registration area can be determined by at least one of the following: a location area (LA) of a GSM system, a routing area (RA) of a packet-switched or a 3G systems, a registration location area (RLA)/overlapping location area (OLA) and a paging area of a PDC and a PHS system, a cell area (CA) of a 3G systems, and an UTRAN Registration Area of a UMTS/WCDMA system.

18. The method of claim 10, wherein when the first partition units are the non-partitionable, generating the second partition units by combining at least two of the first partition units based on the mobility data of the corresponding first partition units is done.